

**ENVIRONMENTAL QUALITY AWARD
(INDUSTRIAL INSTALLATION)
NAVAL AIR STATION JACKSONVILLE, FLORIDA
October 2014– September 2016**

Naval Air Station, Jacksonville

Award category	Environmental Quality-Industrial Installation
Name of nominated team	Naval Air Station Jacksonville
Shipping/Mailing address	Commanding Officer Naval Air Station, Stop 1 Jacksonville, FL 32212-0016
Nominee Point of Contact	Michael Pattison
Nominating individual's phone number	(904) 542-5789 DSN: 942-5789
Nominating individual's email address	Michael.pattison@navy.mil
Nominee Public Affairs Point of Contact	Kaylee LaRocgue e-mail: Kaylee.LaRocgue@navy.mil
Phone :904-542-5588	

INTRODUCTION

Mission

The mission of Naval Air Station (NAS) Jacksonville is to enable Naval aviation warfighting readiness by supporting the Fleet, Fighter and Family. NAS Jacksonville was established on October 15, 1940, as an air defense strategy to protect Florida's 1,200 miles of coastline from enemy attack. As a master air and industrial base NAS Jacksonville maintains and operates facilities and provides services and materials to support aviation operations and units of the Operating Forces of the Navy and other activities and units, as designated by the Chief of Naval Operations. NAS Jacksonville supports many tenant commands and over 24,000 people during its daily operations. Tenants include Fleet Readiness Center, Fleet Industrial Supply Center, Naval Air Reserve, Naval Computer and Telecommunications Station, Fleet Logistics Support Squadron 58 as well as several patrol and helicopter squadrons. NAS Jacksonville consists of the main Station and three outlying properties, Outlying Landing Field (OLF) Whitehouse and Yellow Water Housing in Duval County Florida and three bombing range, the furthest over 100 miles from the base.

Environment

Included in 3,816 total acres of the Main Station are 2841 acres of improved and semi-improved areas, 894 acres under forest management and 81 acres of open space. NAS Jacksonville is located on a peninsula between the Ortega River on the west and the St. Johns River on the east. The Station contains 186 acres of

wetlands including dome swamp, estuarine tidal marsh, floodplain swamp and 26 acres of lakes. There are 130 permitted retention ponds and 5 rain gardens which filter storm water before it reaches the river.

The 5.6 mile shoreline on the St. Johns River seasonally hosts a sizable population of West Indian manatees. American alligators and endangered wood storks frequently visit sheltered spots. Least terns find nesting spots on older buildings with gravel rooftops. Loggerhead shrikes and belted kingfishers are often seen perched on fences or wires watching for prey. Within the forests are miles of nature trails and watchable wildlife areas. A large tract of undeveloped land on 1.5 miles of the Ortega River shoreline is leased to the City of Jacksonville as the Tillie K. Fowler Regional Park, which is open to the community for nature-based activities.

OLF Whitehouse comprises 1,930 acres of which approximately 1,356 are undeveloped lands, including 593 acres of isolated wetlands. The primary purpose of OLF Whitehouse is to provide flight training and simulated carrier deck landing. Developed areas include the airfield, control tower and fire and rescue station. The 1,180 acres under forest management are predominantly mature slash pine with a moderate palmetto/gallberry understory. 107 acres have been converted to long leaf pine, a favored habitat for gopher tortoises. The remaining 175 acres contain natural communities of cypress and gum hammocks and other mixed hardwoods. Forests contain habitat for Bachman's sparrows, Sherman's fox squirrels, small mammals and reptiles and various species of migratory birds. Forested areas outside the airfield clear zone are available for hunting during seasons designated by the State of Florida.

Rodman Bombing Range is surrounded by State-managed conservation area to the north, east and west and the Ocklawaha River to the south. The range has 2,696 total acres. The target and cantonment areas cover approximately 222 acres. The remaining 2,474 acres are forested, and 1,886 acres of these forests are wetlands. Natural communities such as depression marsh, bottomland forest, sand ridge and pristine floodplain swamp provide habitat for many protected species of wildlife including Florida black bear, sandhill crane, pond spice and hooded pitcher plant. The Rodman property is under the same hunting regulations as OLF Whitehouse.

Yellow Water Housing consists of approximately 254 acres, of which 26 acres is developed for military base housing leased through the Public Private Venture. The remaining 228 acres are forested, with slash pine and scattered hardwoods. Bands of bottomland forest and wetlands run through the center of the property along Yellow Water Creek and McGirts Creek.

Two bombing ranges, which are not Navy property are operated for military training. The water range of Lake George uses inert weapons where Pinecastle, located in a National Forest uses live bombs up to 1000 pounds.

Military and Partnership Awards/Acknowledgements:

2016 City of Jacksonville Environmental Protection Board Award for Outstanding Environmental Achievement
2016 Keep Jacksonville Beautiful Commission Government Award for environmental stewardship accomplishments;

2016 DON Honorable Mention for the Navy Community Service Environmental Leadership;

2016 Mulberry Cove Marina re-certified as a Clean Marina Program by the Florida Department of Environment

2016 - SECNAV Ray Mabus presented NAS Jacksonville with the Gold Award for the FY16 SECNAV Energy and Water Management Award. This was presented in recognition of NAS Jacksonville's outstanding energy program and its achievements in FY15 is due largely to the participation and efforts of key personnel aboard NAS Jacksonville to conserve and raise energy awareness.

2016 was the Garden Clubs of America Conservation Award

SUMMARY OF ACCOMPLISHMENTS/TECHNICAL MERIT

1. **Improve Material Management:** In June of 2016, Naval Air Station Jacksonville (NAS Jax) completed one of its largest construction projects in decades: the complete reconstruction of the main runway of Towers

Field, from which military aircraft have been flying since 1940. The last major rebuild of the runway was in 1967.

This \$52 million project took a full year to complete, having started in summer 2015. This megaproject, and the commitment to sustainable operations it represents, showcases the NAS Jax philosophy and practice of conducting its military mission in ways that reduce energy use, reduce the use of fossil fuels, protect the environment, and do more with less through innovation and progressive thinking.

In this major project, the amount of material recycled is mind-boggling: roughly 100,000 tons of concrete - the tonnage of a Nimitz class aircraft carrier - and 40,400 cubic yards of asphalt were removed and reused on site. The old, very hard concrete was ground and used as aggregate. Asphalt was milled and used in shoulders and in other construction on base.

2. Environmental and Economic Performance: as part of the rapidly evolving patrol and reconnaissance mission at NAS Jacksonville, the Navy accepted the keys to several new LEED Silver facilities, including two buildings required for the Navy's new Broad Area Maritime Surveillance (BAMS) unmanned aircraft. Highlights of NAS Jacksonville environmental and energy performance were captured in the table below identifying projects that support the goal EO 13693 and mission sustainment at reduced cost.

Project Description	FY16 Quantity	Environmental Performance
Metals	3057 tons	Solid waste recycling (Not including brass cartridges)
Plastic	20 tons	Solid waste recycling
Cardboard Paper	103 tons	Solid waste recycling
Glass	8.6 tons	Solid waste recycling
Wood Recycling	80 tons	Solid waste recycling
Universal Waste for Recycling	22.9 tons	Solid waste recycling (Lead Acid Batteries) .
Energy Recovery	161.5 tons	Solid waste recycling Used oil, Waste to Energy
Construction-Demolition	199,016 tons	Diversion from landfills
Nitrogen removal from wastewater discharge	25% reduction	Projects to use wastewater on two golf courses and spray excess to open fields to reduce nitrogen compounds to St John's River.
Reduce Energy Use	Ongoing	Energy improvements:

3. Recycling Programs: NAS Jacksonville continued to champion recycling to minimize impact to natural resources, cut cost, and reduce the amount of waste sent to landfill.

a. **Diversion from Landfill:** During FY-16, over 200,000 tons of waste was diverted from landfill.

b. **Metals Reclamation:** During FY-16, the base recycled over 3,057 tons of metal Significant monetary credits resulted from this process were returned to the Navy contract.

c. **Recycle Used Oil and JP-5Fuel, Contaminated Oils and Antifreeze:** The base recycled 161 tons of used oil for energy recovery bringing close to \$35,000 back to the Qualified Recycling Program.

d. Nitrogen recycling

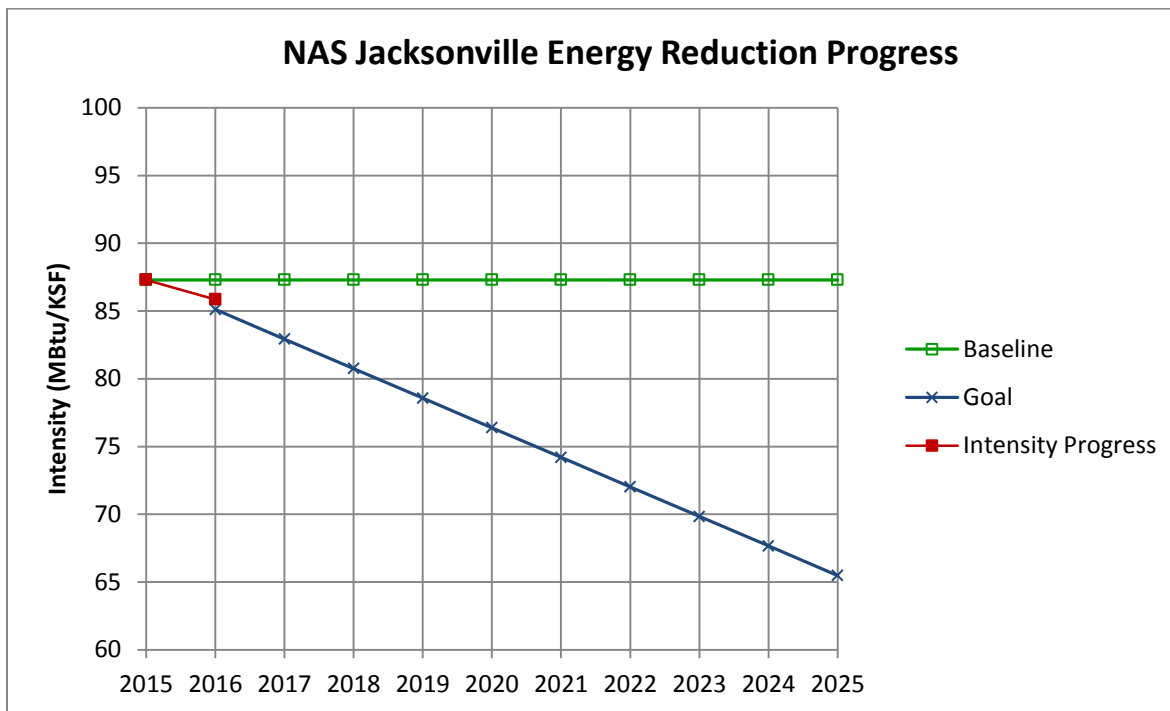


Caption: A major accomplishment marked on October 15, 2015, was the ribbon cutting for the NAS Jacksonville wastewater effluent reuse project. This project redirected the organics-rich effluent from the Station’s wastewater treatment plant from the St. Johns River to a computer controlled system which, depending on weather conditions, sends the water to irrigate either the NAS Jacksonville or Timuquana Country Club golf courses, to storage in a 10 million gallon holding pond, to land application via sprinklers at the south end of the Station or – failing all these – to the St. Johns River.

The aggregate total nitrogen (TN) loading for the past quarter from both the NAS Jacksonville and NS Mayport WWTFs showed a 25% reduction from allowable limits. Completed re-use projects that strives to divert 100% of wastewater to irrigate and provide nutrients to golf courses and a spray field which reduced groundwater consumption and nitrogen loading to the St. John’s River.

Total Nitrogen Aggregate Loading Results		
Month	Aggregate TN Load	Interim Aggregate TN Load Limit
	(lbs)	(lbs)
July 2016	59,750	80,000
August 2016	57,101	80,000
September 2016	54,764	80,000

e. Energy Management NAS Jacksonville is supporting Navy’s energy conservation program by focusing largely on two areas: energy project development and implementation; and refreshing the Installation’s Building Energy Monitor Program as part of the installation’s larger energy awareness program.



ORIENTATION TO MISSION

- EMS Program:** The base considered environmental stewardship and is committed to the goals of EO 13693 and the DoD Strategic Performance Plan. The base, yearly, updates aspects of its process activities to conserve resources, reduce waste, and ensure environmental compliance at the lowest cost possible.
- Environmental Training:** NAS Jacksonville provides in-house training in hazardous waste management twice per year, spill prevention management as needed, participates in waterborne Facility Response Team training. Contract personnel must take related ECATTS environmental training and EMS awareness training to be able to work on the installation.

TRANSFERABILITY

1. Environmental Compliance Review

NAS Jacksonville Environmental Division reviewed proposed projects and evaluated the projects for environmental compliance. Design and execution of all proposed actions shall incorporate applicable environmental requirements. Effective environmental project reviews are provided for all new or modified processes and National Environmental Policy Act (NEPA) analyses will be performed on all projects with the potential for significant impacts to the environment when required.

2. Technology Transfer

NAS Jacksonville supported technology transfer through resource conservation and pollution prevention by limiting hazardous materials used on Station to those with lesser environmental impact (if alternatives are available)

STAKEHOLDER INTERACTION/EDUCATION OUTREACH AND PARTNERING

NAS Jacksonville is a charter member of the Northeast Florida Environmental Compliance Partnering Team. The team's goal is to promote environmental compliance and sustainability through a cooperative effort aimed at environmental excellence. In April 2016 NAS JAX Environmental continued the long tradition of the annual Earth Day celebration at the Jacksonville Landing. The base had many hours of volunteer military and employees who also participated in Florida coastal clean-up events involving removal of trash and debris from beaches, lakes, and rivers. Community outreach included hosting hundreds of children at our Interpretive Center and providing base environmental initiative tours to several groups of community leaders

PROGRAM IMPACT

NAS Jacksonville developed programs to demonstrate environmental stewardship. The on-site re-use of over 200,000 tons of runway and taxiway materials saved over \$7 million in landfill disposal costs while reducing the need for raw materials, commitment to Environmental Management System will ensure the sustainability of our current and future efforts. Excellence in stewardship-diversion was demonstrated by recycling 100% of airfield concrete and asphalt (over 180,000 tons) during airfield project. Recycled over 300 tons of materials through a Qualified Recycling Program and converted 4,000 gallons of vegetable oil to biodiesel. Demonstrated sound management of approximately three million pounds of regulated waste, including 7,500 pounds from squadrons of aircraft temporarily bedded at a commercial airport.

1. Environmental Aspects and Challenges: An Environmental Aspect is a portion of an organization's activities or services that can interact with or impact the environment. Due to the wide-range of industrial processes NAS Jacksonville performed in support of naval aviation, naval training and mission support of 120 tenant organizations NAS Jacksonville faced substantial environmental challenges that had considerable impacts on the environment. Of these challenges, NAS Jacksonville had many significant environmental aspects, which included processes and activities involved in chemical and mechanical painting, surface coating, chemical cleaning and degreasing, composite repair, bombing range operations, wastewater spray operations, and the complete rebuilding of a runway. NAS Jacksonville aspect management is challenged by a large industrial aircraft refit facility which discharges to the on-site wastewater treatment system that strives to reduce discharge to the St John River by on-site and off-site spray irrigation of golf courses and other lands. - After NAS Jacksonville not having a compliant EMS for several years, leadership compiled a highly functioning Environmental Management Systems (EMS) by utilizing various talents and resources of NAS Jacksonville, completed one of the most successful External EMS audits in CNRSE and was able to declare a compliant "EMS-in-Place" in August 2016.- Other indicators of NAS Jacksonville's climate of environmental compliance and stewardship was the Florida Department of Environmental Protection (FDEP) storage tank inspection conducted in November 2016 that yielded zero discrepancies for the 84 registered tanks that are owned/maintained by several different tenants/organizations. And finally the City of Jacksonville Environmental Protection Board's "Outstanding Environmental Achievement" award was presented to NAS Jacksonville CO during a September 2016 luncheon with the award signified NAS Jacksonville's command climate of sound environmental protection, stewardship and community involvement.

2. Program Management: NAS Jacksonville maintained a certified ISO 14001:2004 Environmental Management System (EMS) program driven in accordance with NAS Jacksonville Environmental Policy Statement, which focuses on a commitment to environmental compliance, sustainability and pollution prevention, and continual improvement. The NAS Jacksonville Environmental Division was managed by an Environmental Director with a staff of 11 professional and technical personnel who were responsible for environmental compliance, environmental operations, and environmental quality. In order to provide high quality services and continual improvement, the environmental team coordinates closely with internal stakeholders including 10 squadrons, safety, and many of the 120 tenants who have the potential for environmental violations. Coordination with external stakeholders were vital to environmental management with communication with the City of Jacksonville Environmental Resource Department, the Florida Department of Environmental Protection, the Local Emergency Planning Council and , the Environmental Protection Agency.

3. **EMS Program:** The EMS program was supported by a working level Cross Functional Team, which is comprised of representatives from the Installation Environmental Division, Installation Energy Manager, Morale, Welfare and Recreation Qualified Recycling Program Manager and the Utilities and Energy Management Branch as well as representatives from Fleet Readiness Center, Naval Hospital, Defense Reutilization and Marketing Office EMS Program: NAS Jacksonville strived to reduce all environmental impacts, achieve targets and objectives as set forth by Executive Order 13693, increase operating efficiency all while sustaining, enabling, and supporting the fleet, fighter, and family. Following instructions from ISO 14001:2015 and OPNAVINST 5090.1D, NAS Jacksonville had made positive progression towards diverting wastewater from entering the St. John's River, diverting solid waste from local landfills, reducing both energy usage and specific chemical usage while increasing EMS Awareness with military personnel, governmental employees and contractors while working on NAS Jacksonville.